Titel
Title

Agile Prototyping
A combination of different approaches into one main process

Författare
Author

Mohamed A. Abu Baker

Sammanfattning
Abstract

Software prototyping is considered to be one of the most important tools that are used by software engineers nowadays to be able to understand the customer's requirements, and develop software products that are efficient, reliable, and acceptable economically. Software engineers can choose any of the available prototyping approaches to be used, based on the software that they intend to develop and how fast they would like to go during the software development. But generally speaking all prototyping approaches are aimed to help the engineers to understand the customer's true needs, examine different software solutions and quality aspect, verification activities…etc, that might affect the quality of the software underdevelopment, as well as avoiding any potential development risks.

A combination of several prototyping approaches, and brainstorming techniques which have fulfilled the aim of the knowledge extraction approach, have resulted in developing a prototyping approach that the engineers will use to develop one and only one throwaway prototype to extract more knowledge than expected, in order to improve the quality of the software underdevelopment by spending more time studying it from different points of view.

The knowledge extraction approach, then, was applied to the developed prototyping approach in which the developed model was treated as software prototype, in order to gain more knowledge out of it. This activity has resulted in several points of view, and improvements that were implemented to the developed model and as a result Agile Prototyping AP, was developed. AP integrated more development approaches to the first developed prototyping model, such as: agile, documentation, software configuration management, and fractional factorial design, in which the main aim of developing one, and only one prototype, to help the engineers gaining more knowledge, and reducing effort, time, and cost of development was accomplished but still developing software products with satisfying quality is done by developing an evolutionary prototyping and building throwaway prototypes on top of it.